

5527756 02 10/10/1998 Inventor: AMM
LISTING OF THE CLAIMS

1. (Previously Amended) An intermediate lens pad comprising
a plurality of slots spaced apart around the center of the pad, extending
radially from positions spaced from the center of the pad and extending upwardly so as
to be open at the periphery of the pad to enable the pad to follow the curvature of a lens
tool,

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said pad having a first side and a second side, said first side capable of being
secured to a curved surface of a lens tool when the pad is in use, and said second side
having a substantially smooth surface comprising a multiplicity of holes or recesses
substantially uniformly distributed over an entirety of said second side surface, said
holes or recesses being at least an order of magnitude smaller than the intermediate
lens pad,

whereby a lens surfacing pad having a peel-off adhesive on one side and a
working surface on its other side, can be secured by said adhesive side to said
intermediate lens pad so as to inhibit relative movement between said intermediate lens
pad and said lens surfacing pad during surfacing, while allowing ready manual
removal of the surfacing pad for replacement by a different surfacing pad.

2. (Original) An intermediate lens pad according to claim 1, wherein the
holes or recesses each have a diameter substantially in the range from 0.2mm to 8mm.

3. (Original) An intermediate lens pad according to claim 1, wherein the
holes or recesses are arranged in honeycomb formation.

4. (Previously Amended) An intermediate lens pad according to claim 1, wherein the intermediate lens pad comprises a plastic material.

5. (Original) An intermediate lens pad according to claim 4, wherein the material of the intermediate lens pad comprises polyvinyl chloride.

6 and 7 (Previously Cancelled).

8. (Currently Amended) An intermediate lens pad comprising a plurality of slots spaced apart around the center of the pad, extending radially from positions spaced from the center of the pad and extending upwardly outwardly so as to be open at the periphery of the pad to enable the pad to follow the curvature of a lens tool, said pad having a first side and a second side, said first side capable of being secured to a curved surface of a lens tool when the pad is in use, and said second side having a substantially smooth surface defined by outer surfaces of a multiplicity of protuberances substantially uniformly distributed over said second side surface such that the distance between adjacent protuberances is an order of magnitude smaller than the intermediate lens pad,

whereby a lens surfacing pad having a peel-off adhesive on one side and a working surface on its other side, can be secured by said adhesive side to said intermediate lens pad so as to inhibit relative movement between said intermediate lens pad and said lens surfacing pad during surfacing,

while allowing ready manual removal of the surfacing pad for replacement by a different surfacing pad.

9. (Original) An intermediate lens pad according to claim 8, wherein the spaces between adjacent protuberances each has a width substantially in the range from 0.2mm to 8mm.

10. (Original) An intermediate lens pad according to claim 8, wherein the protuberances are arranged in honeycomb fashion.

11. (Previously Amended) An intermediate lens pad according to claim 8, wherein the intermediate lens pad comprises a plastic material.

12. (Original) An intermediate lens pad according to claim 11, wherein the material of the intermediate lens pad comprises polyvinyl chloride.

13 and 14 (Previously Cancelled).

15. (Previously Presented) A lens tool assembly comprising:

a lens tool having a curved surface;

an intermediate lens pad secured with adhesive to said curved surface of the lens tool; and

a lens surfacing pad having one side provided with an adhesive layer by which said lens surfacing pad is secured to said intermediate lens pad,

wherein the intermediate lens pad has a plurality of slots spaced apart around the center of the pad, extending radially from positions spaced from the center of the pad and extending outwardly so as to be open at the periphery of the pad to enable the pad to follow the curvature of the lens tool, and wherein an outer surface of

the intermediate lens pad is substantially smooth and comprises a multiplicity of holes or recesses substantially uniformly distributed over an entirety of the outer surface, said holes or recesses being at least an order of magnitude smaller than the intermediate lens pad.

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~~16. (Previously Presented; Withdrawn) A method of surfacing a lens, said method comprising:~~

securing an intermediate lens pad to the curved surface of a lens tool;

peeling off a protective cover from an adhesive layer on one side of a lens surfacing pad and securing the lens surfacing pad with the adhesive layer to an upper surface of the intermediate lens pad;

surfacing a lens with a working surface of the lens surfacing pad, the adhesive layer inhibiting relative movement between the intermediate pad and the lens surfacing pad during surfacing, while facilitating ready manual removal of the surfacing pad for replacement by a different surfacing pad; and

effecting such removal and replacement, and surfacing the lens or a different lens using the working surface of the replacement pad,

wherein the intermediate lens pad has a plurality of slots spaced apart around the center of the pad, extending radially from positions spaced from the center of the pad and extending outwardly so as to be open at the periphery of the pad to enable the pad to follow the curvature of the lens tool, and wherein an outer surface of the intermediate lens pad is substantially smooth and comprises a multiplicity of holes or recesses substantially uniformly distributed over an entirety of the outer surface,

C said holes or recesses being at least an order of magnitude smaller than the
C intermediate lens pad.

17. (Previously Presented) A lens tool assembly comprising:

a lens tool having a curved surface;

b' an intermediate lens pad secured with adhesive to said curved surface of the
lens tool; and

SB a lens surfacing pad having one side provided with an adhesive layer by
which said lens surfacing pad is secured to said intermediate lens pad,

C wherein the intermediate lens pad has a plurality of slots spaced apart
around the center of the pad, extending radially from positions spaced from the center
of the pad and extending outwardly so as to be open at the periphery of the pad to
enable the pad to follow the curvature of the lens tool, and wherein an outer surface of
the intermediate lens pad is substantially smooth and is defined by outer surfaces of a
multiplicity of protuberances substantially uniformly distributed over the outer surface
such that the distance between adjacent protuberances is an order of magnitude smaller
than the intermediate lens pad.

18. (Previously Presented; Withdrawn) A method of surfacing a lens, said
method comprising:

C securing an intermediate lens pad to the curved surface of a lens tool;

peeling off a protective cover from an adhesive layer on one side of a lens surfacing pad and securing the lens surfacing pad with the adhesive layer to an upper surface of the intermediate lens pad;

surfacing a lens with a working surface of the lens surfacing pad, the adhesive layer inhibiting relative movement between the intermediate pad and the lens surfacing pad during surfacing, while facilitating ready manual removal of the surfacing pad for replacement by a different surfacing pad; and

effecting such removal and replacement, and surfacing the lens or a different lens using the working surface of the replacement pad,

wherein the intermediate lens pad has a plurality of slots spaced apart around the center of the pad, extending radially from positions spaced from the center of the pad and extending outwardly so as to be open at the periphery of the pad to enable the pad to follow the curvature of the lens tool, and wherein an outer surface of the intermediate lens pad is substantially smooth and is defined by outer surfaces of a multiplicity of protuberances substantially uniformly distributed over the outer surface such that the distance between adjacent protuberances is an order of magnitude smaller than the intermediate lens pad.

[Please add the following new claims:]

19. (New) An intermediate lens pad system, comprising:

an intermediate lens pad, said intermediate lens pad comprising a first side and a second side, said first side being configured to be secured to a curved surface of a lens tool during a lens surfacing operation, and said second side being substantially

smooth and comprising a plurality of holes or recesses distributed over a substantial portion of said second side; and

a lens surfacing pad comprising an adhesive surface and a working surface, said adhesive surface being configured to secure said lens surfacing pad to said intermediate lens pad during said lens surfacing operation,

wherein said plurality of holes or recesses and said substantially smooth second side of said intermediate lens pad are configured to release said adhesive surface for manual removal of said lens surfacing pad from said intermediate lens pad.

20. (New) An intermediate lens pad system according to claim 19, wherein said second side of said intermediate lens pad further comprises a plurality of protuberances.

21. (New) An intermediate lens pad system according to claim 19, wherein said intermediate lens pad comprises a wire mesh.

22. (New) An intermediate lens pad system according to claim 19, wherein said adhesive surface of said lens surfacing pad comprises a peel-off adhesive.

23. (New) An intermediate lens pad system according to claim 19, wherein said intermediate lens pad further comprises at least one slot in a perimeter of said intermediate lens pad.

24. (New) An intermediate lens pad system, comprising
an intermediate lens pad, said intermediate lens pad having a shape to enable the intermediate lens pad to conform to a curvature of a lens surfacing tool, said

intermediate lens pad comprising a first side and a second side, said first side being configured to be secured to said lens surfacing tool during a lens surfacing operation, and said second side comprising a plurality of protuberances distributed over said second side; and

a lens surfacing pad, said lens surfacing pad comprising an adhesive on a first side thereof and a working surface on a second side thereof, said adhesive being configured to secure said lens surfacing pad to said intermediate lens pad during the surfacing operation,

wherein said plurality of protuberances are configured to facilitate release of said adhesive for manual removal of the surfacing pad from said intermediate lens pad.

25. (New) An intermediate lens pad system according to claim 24, wherein said intermediate lens pad further comprises holes or recesses between at least some of said plurality of protuberances.

26. (New) An intermediate lens pad system according to claim 24, wherein said intermediate lens pad further comprises at least one slot in a perimeter of said intermediate lens pad.

27. (New) A lens tool assembly, comprising:

a lens tool having a curved surface;

an intermediate lens pad secured at a first side thereof to said curved surface of the lens tool; and

a lens surfacing pad secured by an adhesive layer to said intermediate lens pad,

wherein the intermediate lens pad further comprises a textured outer surface, said textured outer surface being configured to release said adhesive layer for manual removal of said lens surfacing pad from said intermediate lens pad.

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28. (New) The lens tool assembly of claim 27, wherein said textured outer surface of said intermediate lens pad comprises a plurality of holes through said intermediate lens pad and an otherwise substantially smooth surface.

29. (New) The lens tool assembly of claim 27, wherein said textured outer surface of said intermediate lens pad comprises a plurality of recesses in an otherwise substantially smooth surface.

30. (New) The lens tool assembly of claim 27, wherein said textured outer surface of said intermediate lens pad comprises a plurality of protuberances from an otherwise substantially smooth surface.

31. (New) The lens tool assembly of claim 27, wherein said textured outer surface of said intermediate lens pad comprises a wire mesh.

32. (New) A The lens tool assembly of claim 27, wherein said intermediate lens pad further comprises at least one slot in a perimeter of said intermediate lens pad.

33. (New) A lens tool assembly, comprising:

a lens tool having a curved surface;

an intermediate lens pad secured with adhesive to said curved surface of the lens tool; and

a lens surfacing pad provided with an adhesive layer, said lens surfacing pad being secured to said intermediate lens pad by said adhesive layer,

wherein the intermediate lens pad has a plurality of radially-extending slots spaced apart around a center of the intermediate lens pad to enable the intermediate lens pad to follow the curvature of the lens tool, and wherein an outer surface of the intermediate lens pad is substantially smooth and has a plurality of surface features configured to facilitate manual release of said adhesive layer from said intermediate lens pad, said surface features being selected from the group consisting of protuberances, through-holes, recesses, wire mesh, or combinations of the foregoing.

34. (New) An intermediate support pad comprising an adhesive first surface and a textured second surface, said adhesive first surface being configured for attachment of said intermediate support pad to a substrate surfacing tool during a substrate surfacing operation, and said textured second surface being configured to securely support an adhesively attached surfacing pad during the substrate surfacing operation and to release said adhesively attached surfacing pad for manual removal from said intermediate support pad.

35. (New) The intermediate support pad of claim 34, wherein said textured second surface comprises a plurality of holes through said intermediate support pad.

36. (New) The intermediate support pad of claim 34, wherein said textured second surface comprises a plurality of recesses below said second surface.

37. (New) The intermediate support pad of claim 34, wherein said textured second surface comprises a plurality of protuberances from said second surface.

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38. (New) The intermediate support pad of claim 34, wherein said textured second surface comprises a wire mesh pattern.

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39. (New) The intermediate support pad of claim 34, wherein said intermediate support pad further comprises at least one slot in a perimeter of said intermediate support pad.
